REMARKS

In the Office Action of October 22, 2003, the Examiner rejected elected claims 1 and 28-36 as anticipated or obvious in view of the Panasik Patent alone or combined with the patent to Eng. In response Applicant has canceled claim 1, which is replaced with new claim 59. Independent claims 28, 29, 32 and 33 are amended. New claims 59-69 are presented for examination.

Applicant's invention is a novel system and method for providing wireless data communications between a mobile unit and a wired network following a protocol, such as IEEE Standard 802.11. Prior systems following such protocols use access points which are complex because of the need to perform media access control (MAC) functions at the access point. As described in the specification, some MAC functions such as CRC redundancy check and acknowledgement/retransmission functions are simple to perform but time-critical. Other MAC functions are not time-critical, but more complex to process, such as handling association requests and roaming functions. In accordance with the invention, the first group, called "lower level" functions, are handled in a simplified access point, called an RF port, while the second group, called "higher level" functions are handled by a separate computer, which is connected to a plurality of RF ports. The separation of these functions provides for simplification of the design, hardware and software of the RF port, as compared to an access point, and provides for greater flexibility in, for example, load management and QoS functions. Additionally, the cell controller can provide for downloading of firmware to the RF ports thereby enabling convenient updating of firmware.

Applicant's attorney, James J. Maune, held a personal interview with Examiners Hoang and Pham. During the interview applicant's attorney explained the underlying concept of the invention as applied to an IEEE Standard 802.11 system. The advantages of the invention with respect to flexibility and efficiency were explained. It was pointed out that the Panasik reference applied by the Examiner has to do with communicating with a mobile unit via a plurality of access points, and that the applicability of this reference was a result of the broad claims presented. The reference fails to disclose or suggest the concept wherein MAC functions are allocated between the RF ports and the cell controller, as in the present invention.

The Panasik Patent applied by the Examiner describes a system that provides diversity combining of signals received at a plurality of access points and diversity transmission of signals through a plurality of access points to a mobile unit. Signals received at access points are converted to digital format at the access point and sent to a phase alignment block 122, wherein shift registers are used to adjust the signal phase. The phase adjusted signals are combined and sent to a server for interpretation. For transmission signals are formulated in the server and sent as digitized signals to a plurality of access points. Prior to being supplied to the access points the digital signals are phase shifted in shift registers so that when transmitted by the access points they arrive in-phase at the mobile unit.

The system of the Panasik patent necessarily provides detection and interpretation of the signals received from mobile units entirely at the sever. Likewise signals to be sent to mobile units must be entirely formulated in the server. This necessarily flows from the fact that received signals are digitized and combined before being supplied to

the server, and best detection relies on interpretation of the combined signals. For signals to be transmitted to mobile units, the entire signal content is formulated in the server and identical signals are sent to the access points with a phase adjustment in the shift registers.

In contrast, the system as specified in the amended claims provides for lower level MAC functions to be performed in the RF ports. This cannot be achieved in the Panasik system because the signals are first interpreted in the server, the access point not being arranged to interpret signal, such as acknowledgement signals. The Panasik patent does not discuss MAC functions, and it must be expected that all such functions are performed in the server after combination for received signals and prior to distribution to access points for transmitted signals.

Independent claims 28, 29, 32,33, 59, 60, 61, 64, 65 and 69 all specify that lower level MAC functions, including acknowledgement signal generation and processing are performed at the access point and are therefore distinguished over the disclosure of Panasik.

The Eng patent and other art do not suggest overcoming the deficiency of the Panasik patent. The Panasik patent specifically provides a system wherein all signal interpretation must be done in the server after combination of received signals and to generate identical transmit signals. This arrangement makes it impossible to provide functions such as lower level MAC functions at the access point since there is no signal generation or interpretation at the access point. The access point in the Panasik system is a dumb repeater which simply converts the format of signals and sends them along.

CONCLUSION

In view of the foregoing amendments and remarks, favorable consideration and allowance of claims 28-36 and 59-69 are respectfully solicited. In the event that the application is not deemed in condition for allowance, the examiner is invited to contact the undersigned in an effort to advance the prosecution of this application.

Additionally, during the interview it was pointed out that the Examiner had not considered WO 9907047, which had been cited by Applicant. The Examiner agreed to consider this reference if another copy is supplied. Accordingly a copy thereof is enclosed herewith.

Respectfully submitted,

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